

AMENDMENT

In the Claims

Please amend claims 1, 4, 7, 8, 11, 14, 15, 17, 19, 22 and 24 as follows.

Please cancel claims 3, 6, and 9 without prejudice.

Please add new claims 25-29.

1. (Currently Amended) A method comprising:

tuning a receiver of a broadband cable signal associated with a first modulation technique to a channel within the broadband cable signal ~~to receive information including one or more cable modem operating parameters, the broadband cable signal associated with a first modulation technique;~~

temporarily modifying receiver parameters to demodulate the channel according to a second modulation technique that differs from the first modulation technique associated with the broadband cable signal;

sweeping a carrier frequency of the receiver over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock while the receiver parameters are temporarily modified;

and if a channel lock is obtained,

~~recovering information contained within the demodulated signal corresponding to the one or more operating characteristics of the cable modem; and~~

determining whether the channel is a data channel;

and if the channel is a data channel,

updating one or more operating parameters of the cable modem in accordance with the ~~recovered information~~ data channel.

2. (Previously Presented) A method according to claim 1, wherein the channel is a narrow-band channel within the broadband cable signal.

3. (Cancelled)

4. (Currently Amended) A method according to claim 1, wherein tuning ~~[[a]]~~ the receiver to a channel comprises:
- accessing a storage medium for a list of information channels within the broadband cable signal; and
 - selecting a channel from the list to which the receiver is tuned; and
 - ~~demodulating the channel to recover system information.~~
5. (Cancelled)
6. (Cancelled)
7. (Currently Amended) A method according to claim 4, further comprising:
- selecting a next channel from the list of information channels if ~~system information is not contained within a demodulated representation of the channel~~ a channel lock could not be obtained; and
 - ~~repeating the modifying, reading and selecting sweeping steps until cable modem operating information is identified~~ operations to attempt to obtain a channel lock; and
 - repeating the foregoing operations until a data channel is identified.
8. (Currently Amended) A method according to claim 7, further comprising:
- updating the list of channels to promote the channel ~~in which system information was found~~ identified as a data channel to the first channel in the list.
9. (Cancelled)
10. (Original) A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, cause the machine to implement a method according to claim 1.
11. (Currently Amended) A computing system comprising:
- a storage medium including a plurality of executable instructions; and

a control unit, coupled to the storage medium, to execute at least a subset of the plurality of executable instructions to implement a data channel detection agent, wherein the data channel detection agent,

tunes a receiver of a broadband cable signal associated with a first modulation technique to a channel within the signal ~~to receive information including one or more cable modem operating parameters, the broadband cable signal associated with a first modulation technique;~~

temporarily modifies receiver parameters to demodulate the channel according to a second modulation technique that differs from the first modulation technique associated with the broadband cable signal ~~to recover information contained within the channel, the recovered information including the one or more operating characteristics of the cable modem; [[and]]~~

causes a carrier frequency of the receiver to be swept over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock while the receiver parameters are temporarily modified;

and if a channel lock is obtained,

determines whether the channel is a data channel;

and if the channel is a data channel,

updates one or more cable modem operating parameters in accordance with the ~~recovered information~~ data channel.

12. (Previously Presented) A computing system according to claim 11, wherein the data channel detection agent accesses a storage medium for a list of information channels within the broadband cable signal, and selects one of the channels within which to find system information.

13. (Cancelled)

14. (Currently Amended) A computing system according to claim 12, wherein the channel detection agent steps to a next channel in the list if the demodulated channel ~~does not include system operating information~~ is not a data channel.

15. (Currently Amended) A computing system according to claim 14, wherein the channel detection agent updates the list to promote [the] a channel ~~in which the cable modem operating parameters were found~~ identified as a data channel to a first channel in the list.

16. (Cancelled)

17. (Currently amended) A computing system according to claim 11, wherein the channel detection agent further performs operations comprising:

~~restores restoring demodulator settings once the cable modem operating parameters are established to demodulate according to the first modulation technique to produce demodulated channel data; and~~

extracting information from the demodulated channel data to determine whether the channel is a data channel or a digital multimedia channel.

18. (Original) A computing system according to claim 11, wherein the computing system is a cable modem.

19. (Currently Amended) A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, cause the machine to implement a channel detection agent to,

tune a receiver of a broadband cable signal associated with a first modulation technique to a channel within the signal ~~to receive information including one or more cable modem operating parameters, the broadband cable signal associated with a first modulation technique;~~

temporarily modify receiver parameters to demodulate the channel according to a second modulation technique that differs from the first modulation technique associated with the broadband cable signal ~~to recover information contained within the channel, the recovered information including the one or more operating characteristics of the cable modem; [[and]]~~

cause a carrier frequency of the receiver to be swept over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock while the receiver parameters are temporarily modified;

and if a channel lock is obtained,

determines whether the channel is a data channel;

and if the channel is a data channel,

update one or more cable modem operating parameters in accordance with the ~~recovered information~~ data channel.

20. (Previously Presented) A machine accessible storage medium according to claim 19, wherein the instructions to implement the data channel detection agent include instructions to access a storage medium for a list of information channels within the broadband cable signal, and to select one of the channels within which to search for system information.

21. (Cancelled)

22. (Currently Amended) A machine accessible storage medium according to claim 20, wherein the instructions to implement the channel detection agent include instructions to step the receiver to a next channel in the list if the demodulated channel ~~does not include system operating information~~ is not a data channel.

23. (Cancelled)

24. (Currently Amended) A machine accessible storage medium according to claim 19, wherein the instructions to update one or more operating characteristics of the cable modem include instructions to:

restore the receiver to demodulate the ~~identified~~ channel in accordance with the first modulation technique associated with the broadband cable signal;

produce demodulated channel data carried over the channel; and

extract information from the demodulated channel data to determine whether the channel is a data channel or a digital multimedia channel.

Please add the following new claims 25-29

25. (New) The method of claim 1, wherein the operation of determining if the channel is a data channel comprises:

returning the temporarily modified receiver parameters to demodulate the channel according to the first modulation technique to produce demodulated channel data;

extracting information from the demodulated channel data to determine whether the channel is a data channel or a digital multimedia channel.

26. (New) The method of claim 25, wherein the information that is extracted comprises a program identification field (PID) in a DOSCIS protocol header.

27. (New) The method of claim 1, wherein temporarily modifying the receiver parameters comprises:

switching a demodulation mode of the receiver to a QPSK mode.

28. (New) The method of claim 27, wherein temporarily modifying the receiver parameters further comprises:

modifying receiver parameters to effect a low signal to noise ratio and a wide auto-gain control loop bandwidth.

29. (New) The method of claim 27, wherein switching the demodulation mode of the receiver to a QPSK mode is facilitated by an adaptive equalizer.